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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,419

12/08/2003

Scott K. Parrish

261.01

9778

25871 7590 08/10/2009
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EXAMINER

PAK, JOHN D

ART UNIT

PAPER NUMBER

1616

NOTIFICATION DATE

DELIVERY MODE

08/10/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

efspatents@sbiplaw.com

Office Action Summary	Application No. 10/728,419	Applicant(s) PARRISH, SCOTT K.	
	Examiner John Pak	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-8 and 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/21/2009 has been entered.

Claims 1-2, 4-8 and 10-20 are pending in this application.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10, 11 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(1) Claims 10 and 11 recite "a pH of between 1 and 5." pH 5 was not originally disclosed. This lacks adequate descriptive support.

Applicant states in the remarks filed on 5/21/2009 that support is found in specification page 2, lines 4 and 12-13. However, the disclosure there does not mention or convey pH 5.

(2) Claim 18 recites "about 3 to about 30 gallons per acre." The originally filed disclosure did not convey "about with respect to said gallons per acre.

Applicant states in the remarks filed on 5/21/2009 that support is found in specification page 6, lines 7-8. However, the disclosure there does not mention or convey "about" 30-30 gallons per acre. Exact gallons per acre application amount is disclosed and no further disclosure is provided as to different application amounts.

For these reasons, claims 10, 11 and 18 must again be found lacking in adequate descriptive support.

Because of applicant's claim amendments and remarks filed on 5/21/2009¹, the outstanding ground of rejection under 35 USC 112, second paragraph, is hereby withdrawn.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

¹ "Claims 1, 2, 12, and 14 are amended to indicate the composition is a concentrate." See page 5 of the remarks filed on 5/21/2009.

Claims 1-2, 4-8, 10-11 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1252940 in view of The Agrochemicals Handbook, Farm Chemicals Handbook '98, Fritz et al. (US 3,879,188) and CABA abstract 80:49077, further in view of Ethephon publication (9/1998) and Imidacloprid publication (3/1995) for the reasons of record. See the Office action of 11/24/2008, pages 7-15, wherein the full discussion there is incorporated herein by reference.

Applicant's arguments of 5/21/2009 have been given due consideration, but they were deemed unpersuasive for the following reasons.

Applicant argues that because CN 1252940 does not provide an example of 10-20% ethephon that its disclosure of 1-50% ethephon fails to suggest 1-20% ethephon. This is a difficult argument to accept. By following applicant's argument to its conclusion, applicant's own disclosure would fail to suggest 30% phosphoric acid for example, because that percentage is not exemplified. The argument is plainly erroneous on its face. CN 1252940 clearly discloses 1-50% ethephon, and 10-20% is fairly suggested therefrom.

Applicant also argues that the acid in the CN 1252940 disclosure is for the "purpose of dissolving imidacloprid" and therefore, such use teaches away from applicant's invention. This is not a persuasive argument. The acid in CN 1252940 does not know why it's there and what it's being used for. Applicant's composition requires an acid and it is sufficient that the prior art CN 1252940 uses the same acid. If it were

the case that patentability hinges on the intended purpose of any composition ingredient, there would be no patent claim that would be safe from being copied since all that any subsequent applicant would need to do is to recite a different intended use for the same exact ingredient.

Applicant argues further that “there would be no expectation that the use of acid in the absence of imidacloprid would be beneficial for any purpose” (emphasis in the original). This may be one of the basic points of disagreement between applicant’s and examiner’s positions. It has been maintained that the ordinary skilled artisan would have recognized the acid in CN 1252940 as having the added benefit of providing additional stability, i.e. less degradation, of ethephon. Less degradation of ethephon would improve efficiency and efficacy. Industry handbooks such as the Agrochemicals Handbook and Farm Chemicals Handbook disclose decomposition at higher pH values and teach pH under 3 or 3.5. The ordinary skilled artisan would therefore have been motivated to use such pH values for formulating and applying ethephon compositions.

Applicant argues that knowledge that the addition of an acid to ethephon promotes stability fails to teach or suggest greater efficacy and efficiency. It is the Examiner's position that such knowledge comes with recognition that less stability equals less ethephon, which suggests less efficacy and less efficiency. Hence, stability with acid equals increased efficacy and increased efficiency.

Applicant reiterates a previous position that "it was not well known that phosphonic compounds formulated as a concentrate with acid could be reliably diluted into an aqueous formulation for direct application to a cotton plant" and cites US 2007/0037707 for support. This argument is not all persuasive – it cannot be understood how applicant ignores the plain teachings of CN 1252940, which explicitly teaches the pre-mix of acid + ethephon. Additionally, although US 2007/0037703 discloses citric + phosphoric acid as a tank mix additive, this post-filing document does not go so far as to state that hydrochloric acid or any other acid cannot be mixed with ethephon. Based on the prior art record established herein, including direct mixing of same or similar inorganic acids as taught by CN 1252940, applicant's arguments are not found persuasive. In light of the evidence taken as a whole, one having ordinary skill in the art would have found it obvious to mix the ingredients as claimed.

In this regard, applicant's specification data on page 6 has been given consideration. The data has been deemed insufficient. It must be noted that although a concentrate composition is being claimed by applicant, applicant's specification data is directed to a diluted composition (how much dilution is unclear). So applicant does not actually have any objective evidence directed to the composition that is being claimed herein.

Further, it cannot be determined what the original concentrate composition was and what the diluted/tested composition was. Thus, it cannot be determined whether

the specification data is directed the currently claimed subject matter. The only information provided in the specification for Table 1 is the fact that 16 fluid ounces of ethephon and 4% v/v "muratic [sic]" per acre were applied to the foliage of the target plant. One of ordinary skill in the art would be able to determine the ingredient concentrations of neither the original concentrate composition nor the diluted composition. 16 fluid ounces of ethephon does not inform the ordinary skilled artisan what was the original concentration and what was the diluted concentration: all that is knowable is that somehow 16 ounces of ethephon was applied to an acre of foliage. 4% v/v hydrochloric acid similarly does not inform the ordinary skilled artisan what was the original concentrate and what was the diluted concentration. Therefore, it cannot be determined based on the applicant's disclosure whether an acid + 10-20% ethephon/salt was used, as claimed herein. Consequently, applicant's data fails to provide any evidence of nonobviousness.

Additionally, it would have been expected that a 4% muriatic acid-containing ethephon composition would be more stable than a composition that did not contain the muriatic acid since ethephon decomposes at pH above 3.5. Less decomposed ethephon would contain more active ingredient to provide the activity for which ethephon is known; and therefore, applicant's data cannot be given probative weight. The data does not rebut the expectation that an acid-added ethephon would be more stable, less decomposed, and thus more active and efficient.

Applicant has failed to establish nonobvious objective evidence with respect to his currently pending claims because, inter alia, applicant did not establish that the pH of the tested ethephon composition without the acid was below 3.5. Further, as fully discussed above, applicant has failed to establish objective evidence of nonobviousness for the currently claimed invention.

Applicant further criticizes each of the cited references individually without taking into account what the prior art taken as a whole teaches. The prior art taken as a whole clearly teaches the combination of ethephon and hydrochloric acid at amounts that are readable on the instant claims. One having ordinary skill in the art would have been well aware of the benefit of an acid in ethephon because ethephon degrades at higher pHs.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

For these reasons, this ground of rejection must be maintained.

Claims 1-2, 4-8, 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (US 3,879,188) in view of CABA abstract 80:49077, The Agrochemicals Handbook, The Farm Chemicals Handbook '98, CN 1252940 and the

ethephon publication for the reasons of record. See the Office action of 11/24/2008, pages 16-22, wherein the full discussion there is incorporated herein by reference.

Applicant's arguments of 5/21/2009 have been given due consideration, but they were deemed unpersuasive for the following reasons.

Applicant continues to argue that at the time the application was filed, "it was understood that addition of acid to ethephon was performed in the tank rather than as a formulation" (emphasis in the original). Applicant also cites US 2007/0037707 as evidence that acid is used as a tank mix additive for ethephon. However, applicant ignores the plain teaching of the cited CN 1252940, which explicitly teaches pre-mix acid + ethephon in concentrate and diluted forms.

Applicant also argues that the acid in the CN 1252940 disclosure is "solely to dissolve the imidacloprid, an agent not even mentioned in Applicant's claims." However, applicant's claims fail to exclude a compatible plant growth regulating ingredient such as imidacloprid and the acid in CN 1252940 does not know why it's there and what it's being used for. Applicant's composition requires an acid and it is sufficient that the prior art CN 1252940 uses the same acid and thus suggests formulating ethephon with an acid. If it were the case that patentability hinges on the intended purpose of any composition ingredient, there would be no patent claim that would be safe from being copied since all that any subsequent applicant would need to do is to recite a different use for the same exact ingredient.

The ordinary skilled artisan would have recognized the acid in CN 1252940 as having the added benefit of providing additional stability, i.e. less degradation, of ethephon. Less degradation of ethephon would improve efficiency and efficacy. Industry handbooks such as the Agrochemicals Handbook and Farm Chemicals Handbook disclose decomposition at higher pH values and teach pH under 3 or 3.5. The ordinary skilled artisan would therefore have been motivated to use such pH values for formulating and applying ethephon compositions.

Applicant has argued that knowledge that the addition of an acid to ethephon promotes stability fails to teach or suggest greater efficacy and efficiency. It is the Examiner's position that such knowledge comes with recognition that less stability equals less ethephon, which suggests less efficacy and less efficiency. Hence, stability with acid equals increased efficacy and increased efficiency.

In this regard, applicant's specification data on page 6 has been given consideration. The data has been deemed insufficient.

First, it cannot be determined what the original concentrate composition was and what the diluted/tested composition was. Thus, it cannot be determined whether the specification data is directed the currently claimed subject matter. The only information provided in the specification for Table 1 is the fact that 16 fluid ounces of ethephon and 4% v/v "muratic [sic]" per acre were applied to the foliage of the target plant. One of ordinary skill in the art would be able to determine the ingredient concentrations of

neither the original concentrate composition nor the diluted composition. 16 fluid ounces of ethephon does not inform the ordinary skilled artisan what was the original concentration and what was the diluted concentration: all that is knowable is that somehow 16 ounces of ethephon was applied to an acre of foliage. 4% v/v hydrochloric acid similarly does not inform the ordinary skilled artisan what was the original concentrate and what was the diluted concentration. Therefore, it cannot be determined based on the applicant's disclosure whether an acid + 10-20% ethephon/salt was used, as claimed herein. Consequently, applicant's data fails to provide any objective evidence of nonobviousness.

Second, it would have been expected that a 4% muriatic acid-containing ethephon composition would be more stable than a composition that did not contain the muriatic acid since ethephon decomposes at pH above 3.5. Less decomposed ethephon would contain more active ingredient to provide the activity for which ethephon is known; and therefore, applicant's data cannot be given probative weight. The data does not rebut the expectation that an acid-added ethephon would be more stable, less decomposed, and thus more capable of delivering the active ingredient. Applicant's specification evidence is thereby deemed insufficient.

Applicant has failed to establish nonobvious objective evidence with respect to his currently pending claims because, inter alia, applicant did not establish that the pH of the tested ethephon composition without the acid was below 3.5. Further, as fully

discussed above, applicant has failed to establish objective evidence of nonobviousness for the currently claimed invention.

Applicant further criticizes each of the cited references individually without taking into account what the prior art taken as a whole teaches. The prior art taken as a whole clearly teaches the combination of ethephon and hydrochloric acid at amounts that are readable on the instant claims. One having ordinary skill in the art would have been well aware of the benefit of an acid in ethephon because ethephon degrades at higher pHs.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

For these reasons, this ground of rejection must be maintained.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to John Pak whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

/John Pak/
Primary Examiner, Art Unit 1616